



Modular RICH Detector

1st Beam Test

Cheuk-Ping Wong

Georgia State University

05-02-2016

Sawaiz, Ping, Murad, Xiaochun, Marco, Lucas, Mickey, and Jin at Fermilab



Beam Test Timeline

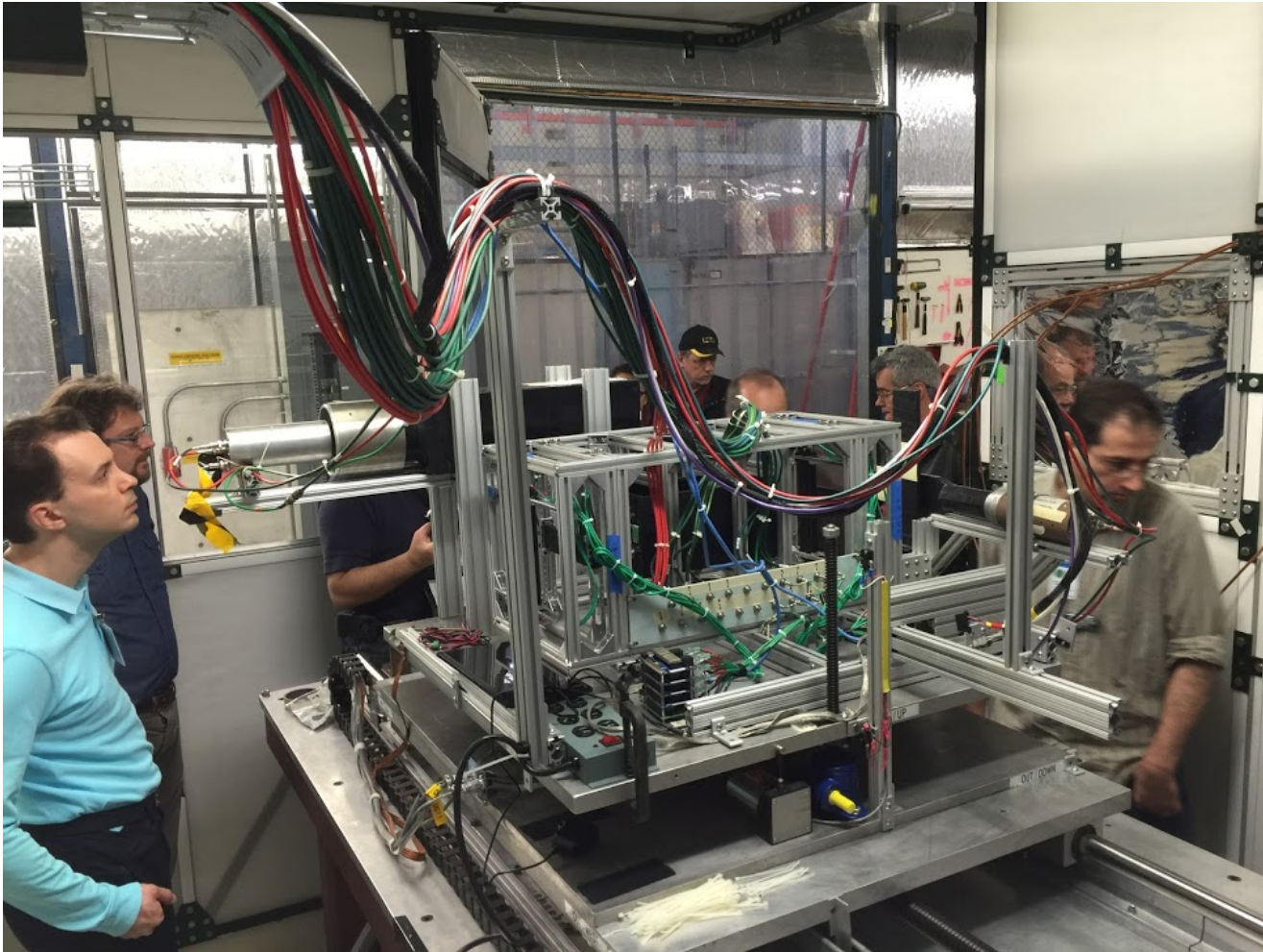
04/17/2016	Arrived at FNAL
04/19/2016	Marco & Lucas arrival
04/21/2016	<ul style="list-style-type: none">• Completed experiment readiness walk• Completed detector cabling
04/21/2016 ~ 04/23/2016	Setup trigger and hodoscope readout
04/24/2016 ~ 04/25/2016	<ul style="list-style-type: none">• Modular RICH Detected was installed w/o aerogel• Commissioning DAQ with 120GeV proton beam
04/26/2016	<ul style="list-style-type: none">• Marco's aerogel was integrated in the Modular RICH detector• First observation of Cherenkov ring from Modular RICH detector
04/27/2016 ~ 04/28/2016	<ul style="list-style-type: none">• Data taking with different configurations
04/29/2016	<ul style="list-style-type: none">• Drove back to Atlanta



Readout Integration

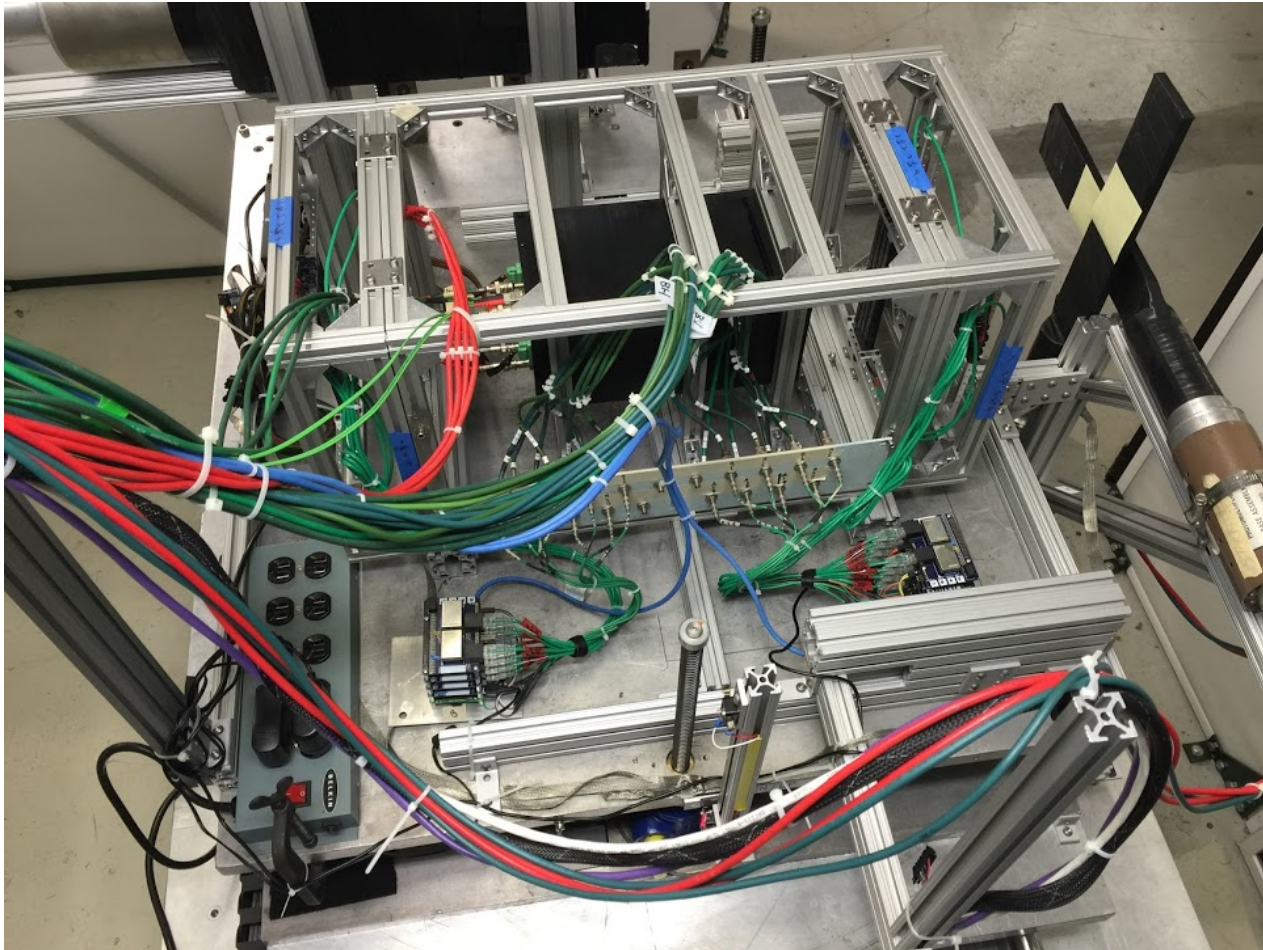


04/21/2016 – Initial Setup



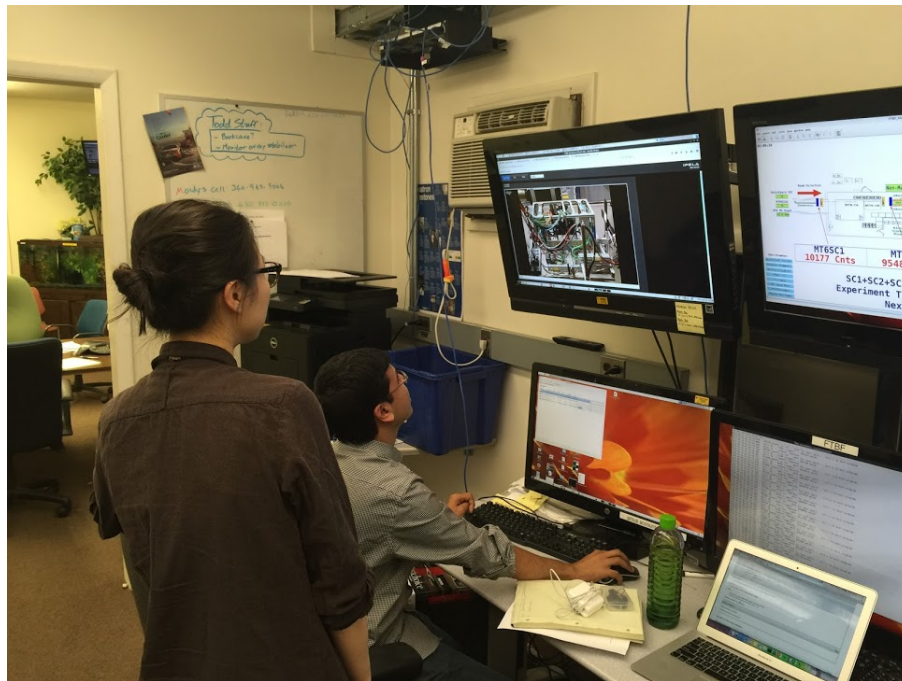
Detector Setup

Hodoscopes with raspberry pi readouts

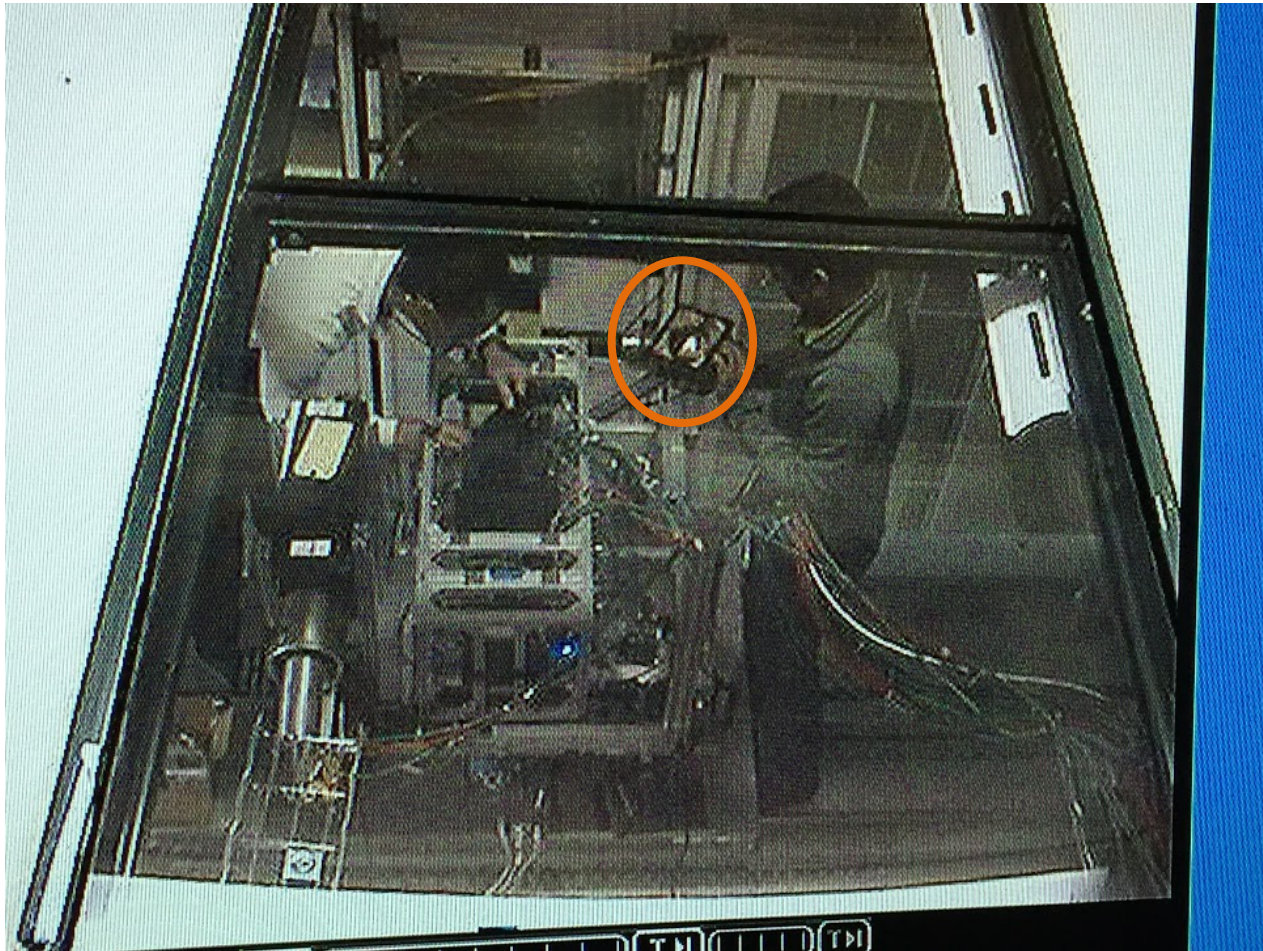


trigger

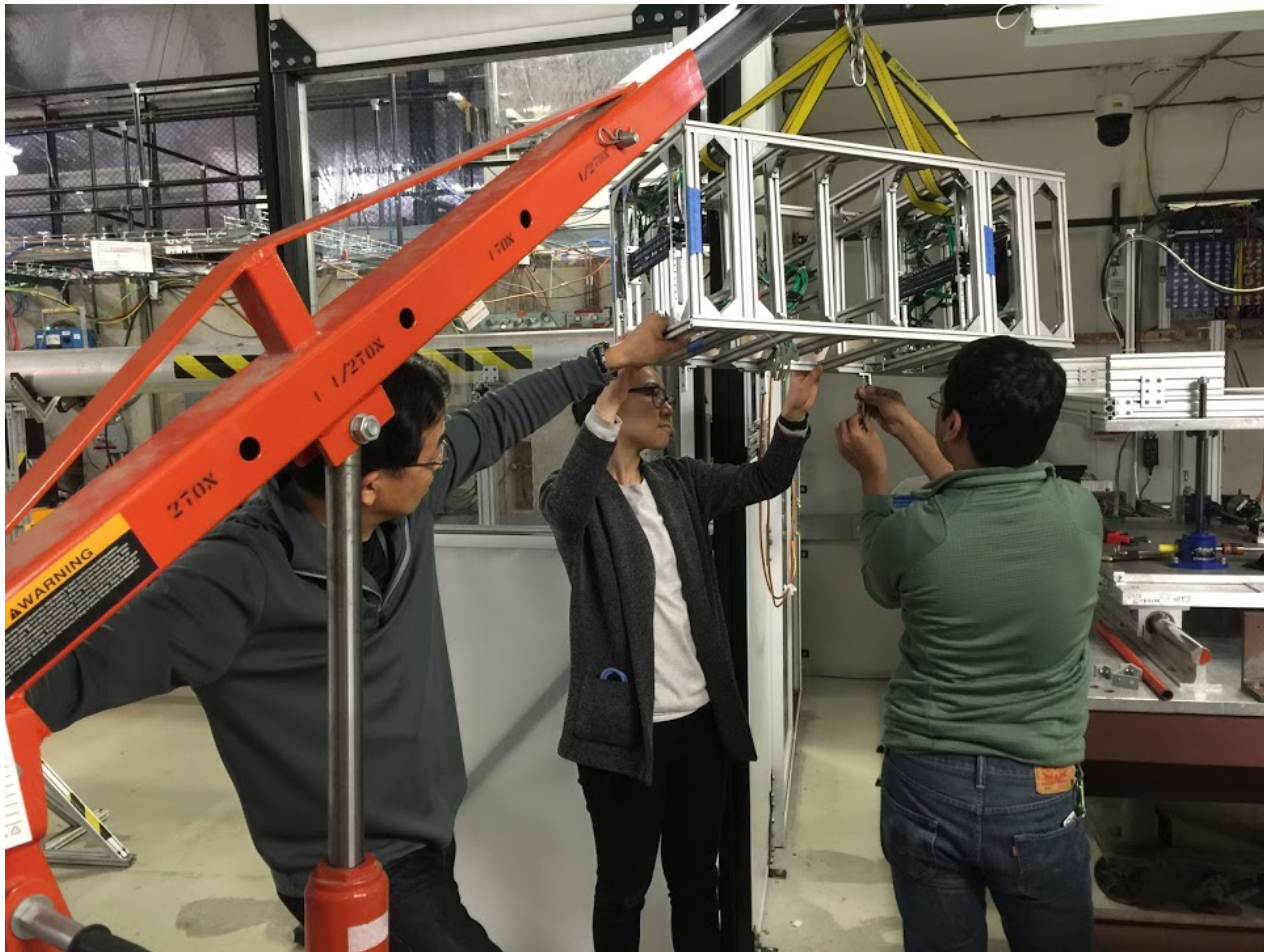
Working in the Control Room



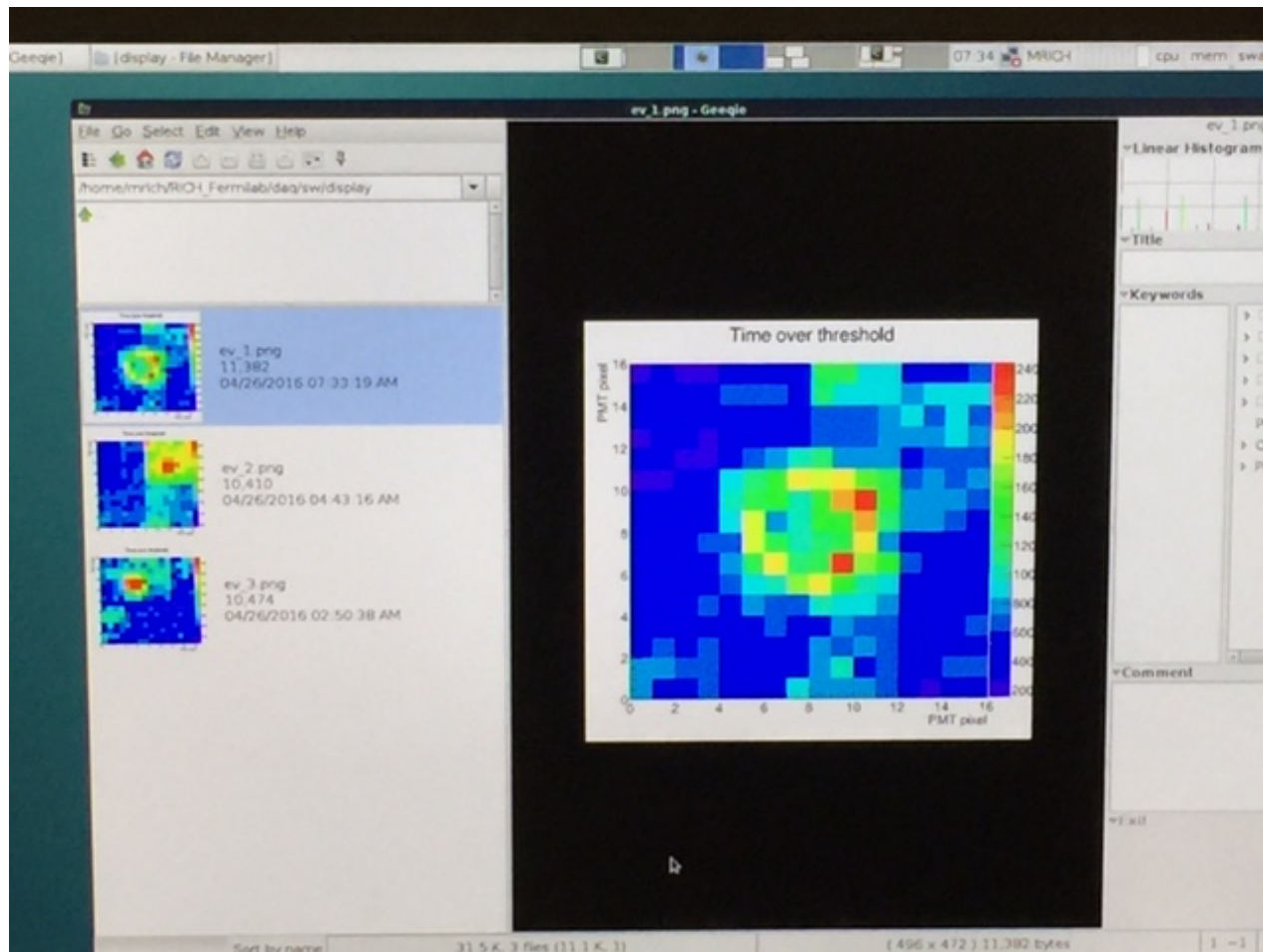
Removing Mirror



Disassembling Setup



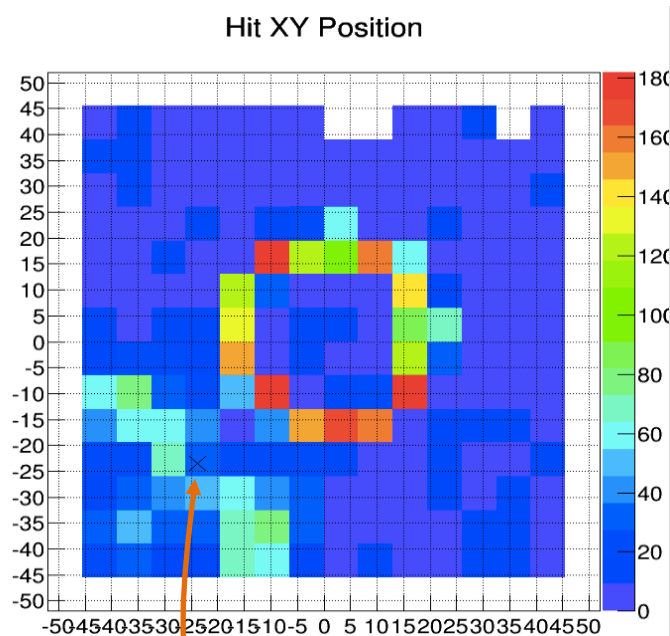
Raw Ring Image from the Very first Spill



Comparison of Simulation to Experiment

Simulation
Launched at $(x,y)=(-24,-24)$ mm

Experiment
Launched at $(x,y)=(-24,-24)$ mm



Launching position

